

**Special Objective:    Provide Earthquake Reconstruction Assistance**

**The Problem**

On January 25, 1999, a 6.0 magnitude earthquake hit Colombia with its epicenter in the Quindio Department. The earthquake affected 28 municipalities, leaving some 37,000 families homeless. More than a thousand people were killed and approximately 8,000 were injured.

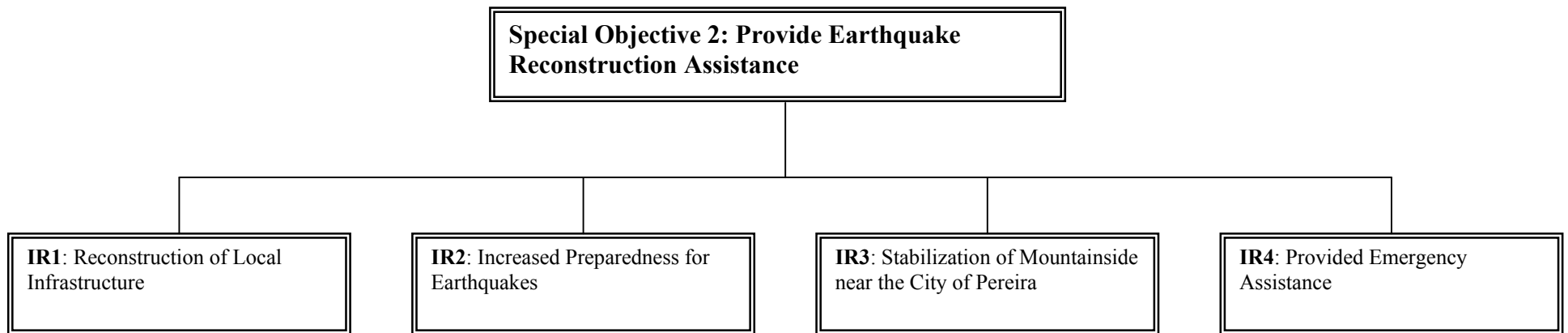
Under USAID/Colombia's Special Objective 2 (SpO2), "Provide Earthquake Reconstruction Assistance, the Mission will provide short, medium, and long-term assistance to mitigate the damaging effects of the earthquake and to assist the GOC to develop appropriate policies that will reduce the risks of damage from future earthquakes.

The methodology used will focus on mitigation (defined by USAID/OFDA as leaving behind models, policies and educational as well as practical, hands-on experience in, for example, the use of appropriate technologies and local materials and adherence to seismo-resistant codes) that will permit greater preparedness in the future for responding to such natural disasters. USAID assistance will emphasize partnerships with local stakeholders in the target geographical area and will encourage the development of public/private partnerships that will expand employment and income generating opportunities, are community-based, have a synergistic relationship with activities of other donors in the region, and that will achieve rapid, lasting results.

USAID's assistance will focus on the poorest victims of the earthquake, those who, at the time of the earthquake, were renting in the city of Armenia. Assistance will focus on providing the affected families with access to shelter or a serviced lot through partnerships between NGOs with a long-standing history of low-income shelter and community infrastructure delivery in Latin America and existing Colombian NGOs and community organizations already operating in the area.

Assessments of infrastructure damage have been underway since the earthquake, including Asociación Colombiana de Ingeniería Sísmica (AIS), Carvajal Foundation, the Fondo para la Reconstrucción del Eje Cafetero (FOREC), Municipal authorities and several universities. USAID's program will use those assessments but will also supplement them where needed.

## Strategic Framework: SpO2



## **Intermediate Results**

### **IR 1: Reconstruction of Local Infrastructure**

USAID is in the process of designing and implementing a reconstruction program to aid earthquake victims in the Armenia area and its adjacent communities. The primary objectives of the USAID emergency assistance will be to: 1) support indigenous institutions in delivering shelter and basic infrastructure services to low income earthquake victims; 2) leave behind sustainable models of delivery which require public and private sector participation, as well as a sustainable investment finance model.

USAID/Colombia assistance will be strongly focused on the restoration of adequate permanent shelter to approximately 2,600 of the region's poorest families, out of the total estimated 6,000 poor families who lost their homes. These homes will be built using a "sites and services" approach, in which most of the construction will be done by the families themselves

### **IR 2: Increased Preparedness for Earthquakes**

#### *Workshops on Appropriate Construction with Local Materials*

USAID/OFDA will fund a program through the Colombian Association of Seismic Engineers that will take advantage of recent experience in appropriate earthquake-resistant uses of local construction materials in three ways. First, the program will work to assure that appropriate uses of local materials become part of existing norms and regulations in the Colombian Building Code. Second, these experiences would focus on developing prototype structures that utilize local materials. Finally, the program will develop workshops to teach appropriate construction and maintenance techniques to communities and builders using local materials.

#### *Materials Banks for the Construction of Community Homes*

Throughout the affected area, many schools, community centers, and other important community buildings suffered serious damage. To help meet the need for construction of materials, USAID/OFDA will work with the Foundation for Higher Education (FES) to create a "Materials Bank". The bank will include basic construction materials such as zinc sheets for roofing, wood and possibly cement. Materials will be provided in exchange for transportation and labor provided by the beneficiaries. Designs for structures will conform to earthquake-resistant guidance and prototypes developed through the USAID/OFDA supported activities of the Colombian Association of Seismic Engineers and where possible, participants will attend workshops on appropriate construction with local materials.

#### *Construction of "Community Homes"*

The Colombian Institute of Family Well Being (ICBF) funds a variety of programs aimed at supporting the physical, psychological and social development of children under seven years of age who live in extreme poverty. These programs worked through neighborhood women who provided childcare within their homes. Many of these women lost their homes in the earthquake and, thus, the ICBF programs have been unable to operate. To reestablish these important programs, USAID will contract the services of a local NGO that will in turn contract local builders to reconstruct these "Community Homes". The homes will provide a clean, dignified and appropriate space that will permit ICBF's interrupted children's programs to resume.

### **IR 3: Stabilization of a mountainside near city of Pereira**

As a direct result of the January 25 earthquake, landslides throughout the region occurred, the most serious just outside the city of Pereira, immediately adjacent to its water supply intake system. An assessment of the damages caused by this landslide was carried-out in May 26-29, 1999, by a four-person team of experts from the U.S. Army Corps of Engineers (USACE), consisting of a detailed field investigation. This investigation (Phase 1) led to recommendations and appropriate actions to be developed under Phases II (planning and construction specifications) and III (construction supervision and administration). Phases I and II were implemented immediately to substantially reduce the risk of damage and/or destruction of the Pereira water supply intake structure from further landslides and other earth movements through the design, evaluation, and construction of a combination of methods to achieve slope stability and problem avoidance.

### **IR 4: Provide Emergency Assistance**

The day following the earthquake, on January 26, U.S. Ambassador to Colombia, Curtis Kamman, declared a disaster, setting in motion the USG response and an initial \$25,000 allotment. This same day, USAID/OFDA deployed a 62-person Miami-Dade County, Florida Search and Rescue Team along with 56,000 pounds of Search and Rescue equipment. That team worked in coordination with the Colombian Red Cross and remained in Armenia through January 30, when the Search and Rescue phase ended. USAID/OFDA provided a total of \$125,000 to the USAID/Colombia Mission to support the local purchase, rental and transportation of relief supplies and equipment. USAID/OFDA also provided \$250,000 to the Pan-American Health Organization (PAHO) in support of earthquake-related health activities. Between January 26-February 4, 1999, USAID/OFDA airlifted 600 rolls of plastic sheeting, 8,000 polyester blankets, 165 cases of MREs (12 MREs per case), 1,980 gallons of bottled water, and 8,460 pre-packaged daily food rations (Humanitarian Daily Rations – HDRs) to the earthquake-affected area. The rolls of plastic sheeting were used to support a

variety of initiatives identified by the USAID/OFDA assessment team in Armenia, including construction of temporary shelter units for families, construction of community kitchens, construction of temporary facilities for the Fire Stations destroyed in the earthquake, and reconstruction of pre-existing day care centers.

## **Achieving Results**

The following indicators will measure progress under the proposed strategic objective and intermediate results:

### **SO Level Indicators:**

- 1) Support to local institutions in delivering shelter and basic infrastructure services to low income earthquake victims provided
- 2) Sustainable delivery models (requiring public and private sector participation) established
- 3) Sustainable investment finance model established

### **IR 1: Reconstruction of Local Infrastructure**

- 1) Low-income homes built

### **IR 2: Increased Preparedness for Earthquakes**

- 1) Prototype structures using local materials developed and integrated into existing norms and regulations of Colombian building code
- 2) Community homes built
- 3) Materials bank established
- 4) Social infrastructure reconstructed materials bank

### **IR 3: Stabilization of a mountainside near city of Pereira**

- 1) Mountainside threatening city of Pereira aqueduct stabilized

### **IR 4: Provide Emergency Assistance**

- 1) Emergency assistance provided